March 3, 2005

From: Peter Vanderveer

To: NCR-101 Committee

Re: Facility Report

The University of Wisconsin Biotron has upgraded several aspects of operation. They are listed below:

- Phase 1 has been completed involving utilizing new computers and LABVIEW^{tm} software for the environmental control system. We have started Phase 2 which involves replacing the bus and control cards that send commands to the valves, pumps, relays etc that control the temperature, relative humidity and lighting in the control environment rooms. We are replacing old custom made components with new off the shelf modules from National Instruments. We are currently testing a configuration that includes National Instruments Ethernet Controller Module FP-2000, National Instruments 8-channel current output (4-20mA) Fieldpoint FP-AO-2000, National Instruments 16-channel discrete output (5-30VDC) Fieldpoint FP-DO-401, National Instruments 16 channel, 16 bit current input Fieldpoint FP-AL-111. The cost will be around $3000-3500 (hardware only) per suite of 4 control environment rooms. We have not begun testing the sensors that will be configured with listed equipment.
- The University of Wisconsin-Madison has begun installation of a centralized campus access control system (CCAS) based on the ContinuumT security management system from Andover Controls, Inc. All new campus buildings will have the system installed. Perimeter doors to the Biotron will be fitted with proximity card readers. Access requires that authorized personnel use both an access control/photo ID card plus a personal identification number (PIN). The combination prevents unauthorized individuals from using a lost or stolen card. The doors will also be monitored by CCTV cameras and door position switches that can be programmed to sound an alarm either locally or remotely.
- The hyperbaric chamber has been upgraded to handle gas monitoring and mixing. Oxygen enrichment, CO_2 monitoring/scrubbing and better relative humidity and temperature control have been added plus data logging (pressure, time, temperature, relative humidity, gas concentrations etc). The year has been spent testing the equipment and writing an operator's manual as required before the system can be certified as safe to use with oxygen enrichment by the UW Safety Department. No enriched oxygen experiments have completed.

Biotron, University of Wisconsin-Madison
2115 Observatory Dr., Madison, WI. 53706 USA
Phone (608) 262-4900 FAX (608) 262-7871

Peter Vanderveer, Manager
pjvander@wisc.edu
http://www.wisc.edu/biotron